

F2620 - 3OC₆HSL Receiver Device with TetR Control



Compiled By - Barry Canton (bcanton@mit.edu)

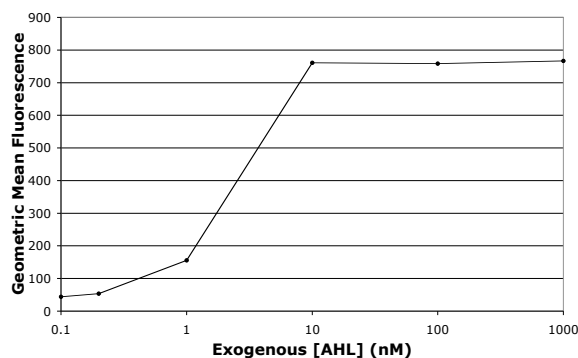
Last Updated - 5/9/05

Description: This device is a member of the Lux family of receivers. The intended signaling molecule is 3OC₆HSL. LuxR production is controlled by a tetR repressible promoter. This was one of the first receivers built and is among the best characterized on multiple plasmids and in different cell strains.

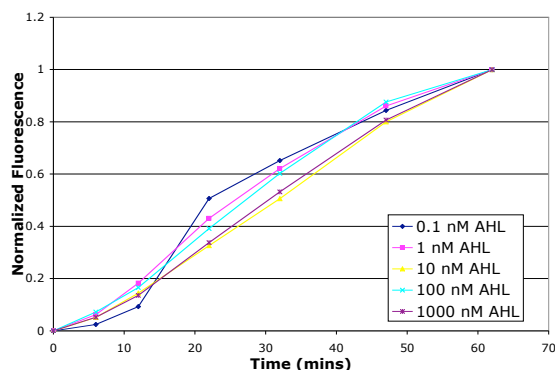
Usage Notes: In the fully induced state this device produces high output PoPS as evidenced by a significant reduction in host growth rate when used with pSB1A2 (see Load characteristics below).

Device Characteristics

1. Transfer Function



2. Latency



3. Load (At full induction):

NTP/(s.copy) - ?

RNAP/copy - ?

Usage Conditions	Test Conditions	Also Used In
Host Strain	MC4100	MG1655, DH5a
Plasmids	pSB3k3-1	pSB1A2
Culture Type	Batch (100ml Flask)	96 Well Plate (200ul)
Media	Supplemented M9	LB
Equipment	FACScan Cytometer, Victor 3 Plate Reader	NPE Cytometer
Protocols	MIT Synthetic Biology FACS Protocol	
Output Devices	E0430	E0434

4. Compatibility: Cross-talk is expected with AHL molecules similar to 3OC₆HSL. Has been tested with the following sender devices - F1610. Crosstalk with devices using the tetR protein.

5. Genetic Stability: The stability of this device over many generations has not yet been evaluated. Use from a freshly streaked plate where possible.